

Cal Tech, Berkeley and UCSB working on 'iPhoD'

http://www.theregister.co.uk/2009/08/10/iphod_awards/print.html

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Military photonic device deals inked

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The US military has handed out triple multimillion-dollar contracts to Californian university tech labs, aimed at developing a device called an "iPhoD".

The iPhoD is not, as one might have supposed, something to do with a famous nibbled-fruit hardware'n'lifestyle firm. Rather, it stands for "integrated Photonic Delay" - essentially an optical component, in this case a delay, on a chip rather than in a conventional fibre device.

There are massive bandwidth optical networks already in service in the US military, **for instance linking the various subsystems of the B-2 Stealth bomber**. Pentagon boffins believe that iPhoDs would be useful in building a future capability to handle optical traffic on chips.

According to the original iPhoD solicitation document:

The iPhoD program will build the framework of a scalable integrated photonic platform technology that provides for the handling and manipulation of photons with throughput efficiency and precision approaching that of electrons within electronic integrated circuits.

It's also a widely-held aspiration outside US military circles to make a shift from today's electronic devices toward the possible "photonic" or "optical" machinery of tomorrow. This could enable the IT world to leap over the approaching, apparently insurmountable barriers to further electronic development.

For now, however, the iPhoD remains in the realm of DARPA, the Pentagon tech bureau whose task is not so much to develop ideas which seem likely to work, as to check out unlikely notions and (generally) find that they're unachievable. Some DARPA programmes pan out: most don't.

In charge of investigating the feasibility of iPhoDs on the agency's behalf will be researchers at Cal Tech and the University of California campuses at Santa Barbara and Berkeley. The three boffinry shops were awarded \$3,202,287, \$9,215,092 and \$5,651,797 respectively in deals inked last week. ®

